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**THE INFLUENCE OF EMPLOYER AND SUPERVISOR SAFETY
MANAGEMENT ON SAFETY PERFORMANCE IN SME
MANUFACTURING**

BY

ALICE KHO HUI FEEI



Thesis Submitted to

Othman Yeop Abdullah Graduate School of Business,

Universiti Utara Malaysia,

in Partial Fulfillment of the Requirement for the Masters of Health and Safety

Management



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ABSTRACT

This study was conducted with the purpose to determine the influence of employer and supervisor safety management on safety performance in Small Medium Enterprise manufacturing sector registered under an audit firm based in Selangor. Set of questionnaires encompassed of the independent variables namely safety concern, safety motivation, safety policy and supervisor safety management and the dependent variables represented by safety performance dimensions were distributed to the employees in the manufacturing sector. A total of 165 questionnaires were distributed randomly. Correlation and multiple regression test were used to analyse the data. The correlation results showed that all the variables were positively and significantly related with the dependent variables. Based on the multiple regression test, the findings of the study revealed that safety concern, safety policy and safety motivation were significantly and positively related to safety performance. However, supervisor safety management influence on safety performance was not significant.

Keywords: Employer Safety Management, Supervisor Safety Management, Safety Concern, Safety Motivation, Safety Policy, Safety Performance

ABSTRAK

Kajian ini dijalankan bagi menentukan hubungan antara kepimpinan majikan dan penyelia dalam pengurusan keselamatan dengan prestasi keselamatan di kalangan pekerja perusahaan kecil sederhana dalam sektor pembuatan di Selangor yang didaftarkan dalam rekod sebuah syarikat audit. Borang kaji selidik yang merangkumi pembolehubah tidak bersandar iaitu keperihatinan keselamatan, motivasi keselamatan dan polisi keselamatan dan pembolehubah bersandar iaitu prestasi keselamatan telah diedarkan kepada pekerja di sektor pembuatan. Sebanyak 165 borang soal selidik telah diedarkan kepada populasi sasaran secara rawak. Dalam kajian ini, ujian korelasi dan regresi berganda telah digunakan bagi menganalisis data kajian. Hasil kajian menunjukkan bahawa keperihatinan keselamatan, motivasi keselamatan dan polisi keselamatan mempunyai hubungan yang positif dan signifikan terhadap prestasi keselamatan. Walaubagaimanapun, kajian menunjukkan bahawa pengaruh pengurusan keselamatan penyelia terhadap prestasi keselamatan adalah tidak signifikan.

Kata Kunci: Pengurusan keselamatan majikan, Pengurusan Keselamatan Penyelia, Keperihatinan Keselamatan, Motivasi Keselamatan, Polisi Keselamatan, Prestasi Keselamatan

ACKNOWLEDGEMENT

First and foremost, I would like to take this opportunity to express my deepest appreciation and gratitude to my supervisor, Mr Syazwan who has continuously been providing guidance, support, advice, inputs and mentoring throughout the entire research term. The completion of this paper could not have been accomplished without the support from him.

I would also like to thank all the companies and all the employee, management and supervisors involved who had been willingly participating in the project and given their full cooperation.

Last but not least, a special thanks to all my fellow friends and family members who had supported and encouraged me throughout the research project and the moral support given to me during the turbulences.

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LIST OF ABBREVIATIONS

DOSH	Department of Occupational Safety and Health
SOCSSO	Social Security Organization
SME	Small Medium Enterprise
GDP	Gross Domestic Product
FMA	Factories and Machinery Act
OSHA	Occupational Safety and Health Act



CHAPTER 1

INTRODUCTION

Workplace injuries and accidents are still the most significant problems in industries today (Takala et al., 2014). Workplace injuries and accidents resulted in damaging consequences for employees as well as the organizations (Sheehan, Donohue, Shea, Cooper, & De Cieri, 2016). On top of that, performance of SME may be disrupted as the accidents may lead to economic losses and contribute a direct cost to SMEs. Safety is also one of the major concerns for an organization as it not only impacted the direct costs but also the indirect costs as well (Neal & Griffin, 2006). Direct costs consist of medical costs, employer expenses, administrative expenses and loss in production and other immeasurable costs that can adversely affect the organization such as lost time of production due to stop work, repair of machinery, training the new replacement worker and overtime (Grindle, Dickinson, & Boettcher, 2000). The costs to the injured employees and their families in terms of emotional misery are inestimable.

Worldwide, it is projected by International Labour Organization and other bodies, where around 2.7 million of women and men die due to the work associated accidents or diseases, which is 19% higher than 2.33 million estimated in 2014. Around 380,500 work associated accidents and 160 million suffered due to occupational related illnesses reported annually. This update indicated a rise in the number of accidents and ill health (ILO, 2018).

While looking in Malaysia statistic based on PERKESO Annual Report, total number accidents reported recorded at 69,980 in 2017, 66,618 in 2016, 62,837 in 2015, 63,331 in 2014 and 63,557 in 2013. The number of industrial accidents reported are

REFERENCE:

- Agrilla, J. A. (1999). Construction safety management formula for success. Proc., Second Int. Conf. of International Council for Research and Innovation in Building and Construction (CIB) Working Commission W99, CIB, Rotterdam, Netherlands, 33–36.
- Alli, B. O. (2008). Fundamental Principles of Occupational Health and Safety. Intentional Labour Organization, Geneva.
- Amirah, N. A., Asma, W. I., Muda, M. S., & Mohd Amin, W. A. A. W. (2013). Safety culture in combating occupational safety and health problems in the Malaysian manufacturing sectors. *Asian Social Science*, 9(3), 182–191. <https://doi.org/10.5539/ass.v9n3p182>
- Baldock, R., James, P., Smallbone, D., Vickers, I., 2006. Influences on small-firm compliance-related behaviour: the case of workplace health and safety. *Environment and Planning C: Government and Policy* 24, 827–846.
- Beary, B. (2004), SMEs worst for health and safety, EC report says, *The Safety and Health Practitioner*, Vol. 22 No. 4, p. 18.
- Bergner, R. M. (2011). What is behavior? And so what? *New Ideas in Psychology*, 29(2), 147–155. <https://doi.org/10.1016/j.newideapsych.2010.08.001>
- Borman, W. C., & Motowildo, S. J. (1993). Expanding the criterion domain to include elements of contextual performance. In Schmitt, J., & Borman, W. C. (Eds.), *Personnel selection in organizations* (pp. 71-98). San Francisco: Jossey-Bass.
- Bougie, R., & Sekaran, U. (2013). Research methods for business: a skill building approach (6th ed). New York: John Wiley & Sons, Inc.
- Bowander, B. (1987). The Bhopal accident. *Technological Forecasting and Social Change*, 32 (2), 169–182.
- Brislin, R.W. (1970). Back-translation for cross-cultural research. *Journal of Cross-*

- Burke, M. J., Sarpy, S. A., Tesluk, P.E., & Smith-Crowe, K. (2002). General safety performance: A test of a grounded theoretical model. *Personnel Psychology*, 55, 429-457. Nominated for the 2002 Scholarly Achievement Award, Human Resources Division, Academy of Management.
- Cagno, E., & Micheli, G. J. L. (2011). Identification of OHS-related factors and interactions among those and OHS performance in SMEs. *Safety Science* 49 (2011) 216–225
- Champoux, D., Brun, J., 2003. Occupational Health and Safety Management in small enterprises: an overview of the situation and avenues for intervention and research. *Safety Science* 41 (4), 301–318.
- Chan, A. P. C., Wong, F. K. W., Chan, D. W. M., Yam, M. C. H., Tam, C. M., & Ng, J. W. S. (n.d.). Construction Safety, 20–22.
- Cheyne, A., Cox, S., Oliver, A., & Tomas, J.M. (1998). Modelling safety climate in the prediction of levels of safety activity. *Work And Stress*, 12(3), 255-271.
- Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace Safety: A Meta-Analysis of the Roles of Person and Situation Factors. *Journal of Applied Psychology*, 94(5), 1103–1127. <https://doi.org/10.1037/a0016172>
- Cooper, M. and Cotton, D. (2000), Safety training-a special case?, *Journal of European Industrial Training*, Vol. 24 No. 9, pp. 481-490.
- Cooper, M.D. and Phillips, R.A. (2004), Exploratory analysis of the safety climate and safety behaviour relationship, *Journal of Safety Research*, Vol. 35 No. 5, pp. 497-512.
- Cree, T., & Kelloway, E. K. (1997). Responses to occupational hazards: Exit and participation. *Journal of Occupational Health Psychology*, 2, 304–311.
- Dea, a. O., & Flin, R. (2001). Site managers and safety leadership in the offshore oil and gas industry. *Safety Science*, 37, 39–57.

Department of Occupational Safety and Health, DOSH (2016). Accessed on 29th June 2018.

Department of Statistics, Malaysia (2018). Employment Statistics Fourth Quarter 2017.

Doyle, M., Claydon, T., Buchanan, D., 2000. Mixed results, lousy process: the management experience of organizational change. *Br. J. Manage.* 11, S59–S80.

Economic Consensus Report, (2016).

Fabiano, B., Curro, F., Pastorino, R., 2004. A study of the relationship between occupational injuries and firm size and type in the Italian industry. *Safety Science* 42 (7), 587–600.

Fan, Q. (2003, September). Creating a conducive legal & regulatory framework for small and medium enterprise development in Russia. A policy dialogue workshop presented in St. Petersburg,

Fang, D., Wu, C., & Wu, H. (2015). Impact of the Supervisor on Worker Safety Behavior in Construction Projects. *Journal of Management in Engineering*, 31(6), 04015001. [https://doi.org/10.1061/\(ASCE\)ME.1943-5479.0000355](https://doi.org/10.1061/(ASCE)ME.1943-5479.0000355)

Fernández-Muñiz, B., Montes-Peón, J. M., & Vázquez-Ordás, C. J. (2014). Safety leadership, risk management and safety performance in Spanish firms. *Safety Science*, 70, 295–307. <https://doi.org/10.1016/j.ssci.2014.07.010>

Flin, R. (2003) ‘Danger-men at work: management influence on safety’, *Human Factors and Ergonomics in Manufacturing*, Vol. 13, pp.1–8.

Flin, R. and Yule, S. (2004) ‘Leadership for safety: industrial experience’, *Quality Safety Healthcare*, Vol. 13, pp.45–51.

Flin, R., Mearns, K., O’Connor P. and Bryden, R. (2000) ‘Safety climate: identifying the common features’, *Safety Science*, Vol. 34, pp.177–192.

Ford, M. T., & Tetrick, L. E. (2008). Safety motivation and human resource management in North America. *International Journal of Human Resource*

Management, 19, 1472- 1485.

Garavan, T.N., O'brien, F., 2001. An investigation into the relationship between safety climate and safety behaviours in Irish organizations. *Irish Journal of Management* 22 (1), 141–170.

Griffin, M.A., & Hu, X. (2013). How leaders differentially motivate safety compliance and safety participation : the role of monitoring, inspiring, and learning. *Safety Science* 60 ,196-202.

Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: A framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5, 347-358.

Grindle, A. C., Dickinson, A. M., & Boettcher, W. (2000). Behavioral safety research in manufacturing settings. *Journal of Organizational Behavior Management*, 20(1), 29–68. <https://doi.org/10.1300/J075v20n01>

Gyekye, S.A. (2010). Occupational safety management: The role of causal attribution. *International Journal Of Psychology*, 45 (6), 405–416.

Hagan, P. E., Montgomery, J. F., & O'Reilly, J. T. (2001). *Accident prevention manual for business and industry (12th ed.)*. Itasca, IL: National Safety Council.

Heinrich, H. W., Petersen, D., and Roos, N. (1950). *Industrial accident prevention*, McGraw-Hill, New York.

Heinrich, H.W., 1959. *Industrial Accidents Prevention*. McGraw-Hill, New York.

Hong, K. T., Surienty, L., & Mui, D. K. H. (2011). Safety Management Practices and Safety Behaviour : A Preliminary Investigation in Malaysian Small and Medium Enterprises in Northern Corridor Economic Region (NCER). *Journal Occupational Safety & Health*, 8(July), 1–11.

Huang, Y., Verma, S.K., Chang, W.R., Courtney, T.K., Lombardi, D.A., Brennan, M.J. and Perry, M.J. (2012). Management commitment to safety vs. employee perceived safety training and association with future injury, *Accident Analysis and Prevention*, Vol. 47, pp. 94-101.

- Isaac, S., & Michael, W. B. 1995. Handbook in research and evaluation. San Diego, CA: Educational and Industrial Testing Services.
- Johnson, S. E. (2003). Behavioral Safety Theory. *Professional Safety*, 48(10), 39.
- Kapp, E. A. (2012). The influence of supervisor leadership practices and perceived group safety climate on employee safety performance. *Safety Science*, 50(4), 1119–1124.
- Khan, Z. A., Nawaz, A., & Khan, I. (2016). Leadership Theories and Styles : A Literature Review Leadership Theories and Styles : A Literature Review. *Journal of Resources Development and Management Journal*, 16(January), 1–7.
- Komaki, J., Heinzmann, A.T., & Lawson, L. (1980). Effect of training and feedback: Component analysis of a behavioral safety program. *Journal of applied psychology*, 65(3), 261-270.
- Koo, T. H., Surienty, L., & Hung, D. K. M. (2011). Occupational Safety and Health (OSH) in Malaysian Small and Medium Enterprise (SME) and Effective Safety Management Practices. *International Journal of Business and Technopreneuership*, 1(2), 322–338.
- Kohn, J. P., Friend, M. A., Winterberger, C. A. (1996). Fundamentals of Occupational Safety and Health. *Government Institute, Industrial hygiene*.
- Laberge, M., MacEachen, E. and Calvet, B. (2014), Why are occupational health and safety training approaches not effective? Understanding young worker learning processes using an ergonomic lens, *Safety Science*, Vol. 68, pp. 250-257.
- Lee, S., & Dalal, R. S. (2016). Climate as situational strength: Safety climate strength as a cross-level moderator of the relationship between conscientiousness and safety behaviour. *European Journal of Work and Organizational Psychology*, 25(1), 120–132. <https://doi.org/10.1080/1359432X.2014.987231>
- Legg, S.J., Olsen, K.B., Laird, I.S. and Hasle, P. (2015, Managing safety in small and medium enterprises, *Safety Science*, Vol. 71, pp. 189-196.
- Lingard, H., & Rowlinson, S. (2005). *Occupational health and safety in construction*

project management . Abingdon, Oxon : Spon Press.

- Lu, C. S., & Yang, C. S. (2010). Safety leadership and safety behavior in container terminal operations. *Safety Science*, 48(2), 123–134.
<https://doi.org/10.1016/j.ssci.2009.05.003>
- Makin, P. J., & Sutherland, V. J. (1994). Reducing Accidents Using a Behavioural Approach. *Leadership & Organization Development Journal*, 15(5), 5–10.
<https://doi.org/10.1108/01437739410059908>
- Martínez-Córcoles, M., Gracia, F., Tomás, I., & Peiró, J. M. (2011). Leadership and employees' perceived safety behaviours in a nuclear power plant: A structural equation model. *Safety Science*, 49(8–9), 1118–1129.
<https://doi.org/10.1016/j.ssci.2011.03.002>
- Mayhew, C., 2000. OHS in Australian ‘micro small businesses: evidence from nine research studies. *Journal of Occupational Health and Safety* 16, 297–305
- McDonald, N., Corrigan, S., Daly, C., & Cromie, S. (2000). Safety management systems and safety culture in aircraft maintenance organisations. *Safety Science* 34 , 151-176.
- McKinney, P. (2002). Expanding HSE 's ability to communicate with small firms : A targeted approach. *International Business*.
- McVittie, D., Banikin, H., Brocklebank, W., 1997. The effect of firm size on injury frequency in construction. *Safety Science* 27 (1), 19–23.
- Micheli, G.J.L., Cagno, E., 2008. Perception of safety issues and investments in safety-management in small-sized and medium-sized enterprises: a survey in the Lecco area. *Prevention Today* 4 (1), 7–23
- Micheli, G.J.L., Cagno, E., 2010. Dealing with SMEs as a whole in OHS issues: warnings from empirical evidence. *Safety Science* 48 (6), 729–733.
- Mohamed, S. (2002). Safety climate in construction site environments. *Journal of Construction Engineering and Management*, 128, 375.

- Mullen, J. (2004). Investigating factors that influence individual safety behavior at work. *Journal of Safety Research*, 35, 275-285.
- Mullen, J., Kelloway, E.K., & Teed, M. (2011). *Inconsistent style of leadership as a predictor of safety behaviour*. *Work & Stress*, 25(1), 44-54.
- Neal, A., Griffin, M. A., & Hart, P. M. (2000). *The impact of organizational climate on safety climate and individual behavior*. *Safety Science*, 34, 99 – 109.
- Neal, A., & Griffin, M. A. (2002). Safety Climate and Safety Behaviour. *Australian Journal of Management*, 27(1_suppl), 67–75.
<https://doi.org/10.1177/031289620202701S08>
- Neal, A., & Griffin, M. A. (2006). A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of Applied Psychology*, 91(4), 946–953.
<https://doi.org/10.1037/0021-9010.91.4.946>
- Northouse, P. G. (2016). *Leadership : theory and practice. Leadership: theory and practice / seventh edition*. <https://doi.org/2016>
- O'Dea, A. and Flin, R. (2001). Site managers and safety leadership in the offshore oil and gas industry, *Safety Science*, Vol. 37, pp.39–57.
- O'Dea, A. and Flin, R. (2003) The Role of Managerial Leadership in Determining Workplace Safety Outcomes, Research Report 044, Health and Safety Executive, UK.
- Omar, S. S., Arokiasamy, L., & Ismail, M. (2009). The background and challenges faced by the small and medium enterprises. A human resources development perspectives. *International Journal of Business and Management*, 4(10), 95-102.
- Onikoyi, I. A. and Awolusi, O.D. (2014). Effects of Mergers and Acquisitions on shareholders wealth in Nigerian banking industry”, *British Journal of Marketing Studies*, Vol. 2, No. 4, pp.52–71
- Phoon, Z. (2010). *DOSH On SMI Issues And Solutions - All About Safety*. [ONLINE] Available at: www.aboutsafety.com/article.cfm?id=206. [Last Accessed 22

August 2014].

Pilbeam, C., Doherty, N., Davidson, R., & Denyer, D. (2016). Safety leadership practices for organizational safety compliance: Developing a research agenda from a review of the literature. *Safety Science*, 86, 110–121. <https://doi.org/10.1016/j.ssci.2016.02.015>

Petersen, D. (2003), Human error, *Professional Safety*, Vol. 48 No. 12, pp. 25-32.

Saloniemi, A., Oksanen, H., 1998. Accidents and fatal accidents – some paradoxes. *Safety Science* 29 (1), 59–66

Sawacha, E., Naoum, S., Fong, D., 1999. Factors affecting safety performance on construction sites. *International Journal of Project Management* 17 (5), 309–315.

Saleh, A. S., & Ndubisi, N. O. (2006). *SME development in Malaysia: Domestic and global challenges*. University of Wollongong

Social Security Organization. Perkeso Annual Report, (2017). Retrieved June 2, 2019 from <http://www.perkeso.gov.my/en/report/annual-reports.html>

SME Annual Report, 2017

Shang, K. C., Yang, C. S., & Lu C. S. (2011). The effect of Safety Management on Perceived Safety Performance in Container Stevedoring Operations. *Int J. Shipping and Transport Logistics*, Vol 3., No.3.

Sheehan, C., Donohue, R., Shea, T., Cooper, B., & De Cieri, H. (2016). Leading and lagging indicators of occupational health and safety: The moderating role of safety leadership. *Accident Analysis and Prevention*, 92, 130–138.

Surienty, L. (2012). *Management Practices and OSH Implementation in SMEs in Malaysia*. School of Management, Universiti Sains Malaysia.

Surienty, L., Hong, K. T., Kee, D., & Hung, M. (2011). Occupational Safety and Health (Osh) in Smes in Malaysia : a. *Journal of Global Enterprenueship*, 1(1), 65–75.

- Smolarski, J., & Kut, C. (2009). The impact of venture capital financing method on SME performance and internationalization. *International Interpreneurship Management Journal*.
- Takala, J., Hämmäläinen, P., Saarela, K. L., Yun, L. Y., Manickam, K., Jin, T. W., ... Lin, G. S. (2014). Global estimates of the burden of injury and illness at work in 2012. *Journal of Occupational and Environmental Hygiene*, 11(5), 326–337.
- Vinodkumar, M.N., & Bashi, M.(2010). Safety management practices and safety behaviour: Assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*, 42(10),2082-2093.
- Wu, T.C., Chen, C.H., Li, C.C., 2008. A correlation among safety leadership, safety climate and safety performance. *J. Loss Prev. Process Ind.* 21 (3), 307–318.
- Wu, C., Wang, F., Zou, P. X. W., & Fang, D. (2016). How safety leadership works among owners, contractors and subcontractors in construction projects. *International Journal of Project Management*, 34(5), 789–805. <https://doi.org/10.1016/j.ijproman.2016.02.013>
- Zin, S. M., & Ismail, F. (2012). Employers' Behavioural Safety Compliance Factors toward Occupational, Safety and Health Improvement in the Construction Industry. *Procedia - Social and Behavioral Sciences*, 36(December 2012), 742–751. <https://doi.org/10.1016/j.sbspro.2012.03.081>
- Zohar, D. (1980). Safety climate in industrial organizations:theoretical and applied. *Journal of Applied Psychology*, 65(1), 96–102.
- Zohar, D., Huang, Y. H., Lee, J., & Robertson, M. (2014). A mediation model linking dispatcher leadership and work ownership with safety climate as predictors of truck driver safety performance. *Accident Analysis and Prevention*, 62, 17–25.
- Zulkifly, S. S., Subramanian, C., Hassan N. H., (2017). Examining the influence of safety leadership towards safety behaviour in SME Manufacturing.
- Field, A. (2009). *Discovering statistics using SPSS*. Sage: London.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate data*

analysis

(7th ed.). New Jersey: Prentice Hall.

Hutcheson G., & Sofroniou N. (1999). The multivariate social scientist: introductory statistics using generalized linear models. London: Sage Publication.

Mundfrom, D.J., Shaw, D.G., & Ke, T.L. (2005). Minimum sample size recommendations for conducting factor analyses. *International Journal of Testing*, 5(2), 159-168.

Pallant, J. (2007). SPSS survival manual—A step by step guide to data analysis using SPSS for windows (3rd ed.). Maidenhead Open University Press.

Sekaran, U. (2003). Research methods for business: a skill building approach. New York: John Wiley & Sons, Inc.

Tabachnick, B.G. & Fidell, L.S. (2007). Using Multivariate Statistics. Northridge, US: Pearson.

Zikmund, W. G. (2003). Business research methods (7th ed.). MA: McGraw-Hill Irwin, Boston.

Pedersen, L.M., & Kines, P. (2011). Why do workers work safely? Development of safety motivation questionnaire scales. *Safety Science Monitor*. 10(15), 1-10.

APPENDICE A: QUESTIONNAIRE

The survey question consists of two section A, B and C.

Soalan kaji selidik ini mengandungi dua bahagian, A, B dan C.

জরিপ প্রশ্নে দুটি বিভাগ এ এবং বি.

Section A: Demographic Information

Bahagian A: Maklumat Demografi

অধ্যায় একটি: জনসংখ্যার তথ্য

Please select only **ONE** answer which is most relevant in your opinion to each of the question. Please mark (/) at the relevant column or fill in the blank, where appropriate.

Sila pilih hanya **SATU** jawapan yang paling tepat untuk setiap soalan. Sila tanda (/) pada ruangan yang sesuai atau isi tempat kosong yang mana bersesuaian.

দয়া করে শুধুমাত্র একটি উত্তর নির্বাচন করুন যা আপনার প্রতিটি প্রশ্নের প্রতি সর্বাধিক প্রাসঙ্গিক। প্রাসঙ্গিক কলামে (/) চিহ্নিত

করুন অথবা উপযুক্ত যেখানে ফাঁকা পূরণ করুন।

1. Your gender ☐ Male ☐ Female
 Jantina anda Lelaki Perempuan
 আপনার লিঙ্গ পুরুষ মহিলা
2. Your marital status ☐ Single ☐ Married
 Taraf perkahwinan Bujang Berkhawin
 anda অবিবাহিত বিবাহিত
 আপনার বৈবাহিক অবস্থা ☐ Divorced/Widowed
 Bercerai/ Janda/ Duda
 তালাকপ্রাপ্ত/ বিধবা
3. Age ☐ <25 ☐ 25-30
 Umur ☐ 31 -35 ☐ 35 – 40
 বয়স ☐ >40
4. Education ☐ PMR/ SPM ☐ Certificate
 Tahap Pendidikan ☐ Diploma ☐ Degree
 শিক্ষা ☐ Master ☐ pHD
☐ Others
5. Race ☐ Malay ☐ Chinese
 Bangsa Melayu Cina
 জাতি ☐ Indian ☐ Others
 India (specify): _____
 Lain-lain (sila nyatakan) : _____
6. Years of working with current company

Tahun
perkhidmatan
dengan syarikat ini

এই কোম্পানির সঙ্গে সেবা
বছর



UUM
Universiti Utara Malaysia

Section B:

Bahagian B

বিভাগ বি

To what extent do you agree or disagree with each statement below describing your current employer/ supervisor? Please select the most accurate based on the scale above and circle your answer.

Sejauh mana anda bersetuju atau tidak bersetuju dengan setiap kenyataan di bawah yang menggambarkan majikan/ pengurus anda sekarang? Sila pilih yang paling tepat dan bulatkan jawapan anda berpandukan skala di atas.

নিচের প্রতিটি বিবৃতির সাথে আপনি কতটা একমত বা অসম্মতি জানান যা এখন আপনার নিয়োগকর্তা / পরিচালককে চিত্রিত করে? উপরে স্কেলের উপর ভিত্তি করে সবচেয়ে সঠিক নির্বাচন এবং আপনার উত্তর বৃত্ত করুন।

Strongly Disagree/ Sangat Tidak Setuju/ দুঃভাবে অসম্মতি	Disagree/ Tidak Setuju/ অসম্মতি	Neither Agree nor Disagree/ Berkecuali/ নিরপেক্ষতা	Agree/ Setuju/ একমত	Strongly Agree/ Sangat Setuju/ দুঃভাবে একমত
1	2	3	4	5

No	Question	Strongly Disagree/ Sangat Tidak Setuju/ দৃঢ়ভাবে অসম্মতি	Disagree/ Tidak Setuju/ অসম্মতি	Neither Agree nor Disagree/ Berkecuali/ নিরপেক্ষতা	Agree/ Setuju/ একমত	Strongly Agree/ Sangat Setuju/ দৃঢ়ভাবে একমত
1.	My employer/ managers stress the importance of wearing personal protective equipment Majikan/ pengurus saya menekankan kepentingan memakai alat perlindungan diri আমার নিয়োগকর্তা / ম্যানেজার ব্যক্তিগত সুরক্ষা সরঞ্জাম পরার গুরুত্ব অপরিহার্য সম্পর্কে	1	2	3	4	5
2.	My employer/ managers express an interest in acting on safety policies Majikan/ pengurus saya menyatakan minat untuk bertindak terhadap polisi keselamatan আমার নিয়োগকর্তা / ম্যানেজার নিরাপত্তা নীতিগুলিতে অভিনয় করার আগ্রহ প্রকাশ করে	1	2	3	4	5

- | | | | | | | |
|----|--|---|---|---|---|---|
| 3. | My employer/ managers are concerned about safety improvement
Majikan/ pengurus saya prihatin tentang improvisasi keselamatan
আমার নিয়োগকর্তা / ম্যানেজার নিরাপত্তা উন্নতি সম্পর্কে উদ্বিগ্ন | 1 | 2 | 3 | 4 | 5 |
| 4. | My employer/ managers coordinate with other departments to solve safety issues
Majikan/ pengurus saya menyelaraskan dengan jabatan lain untuk menyelesaikan isu keselamatan
আমার নিয়োগকর্তা / পরিচালক নিরাপত্তা সমস্যা সমাধানের জন্য অন্যান্য বিভাগের সাথে সমন্বয় সাধন করে | 1 | 2 | 3 | 4 | 5 |
| 5. | My employer/ managers show consideration for workers
Majikan/ pengurus saya bertimbang rasa terhadap pekerja
আমার নিয়োগকর্তা / ম্যানেজার কর্মীদের জন্য বিবেচনা দেখান | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|----|---|---|---|---|---|---|
| 6. | <p>My employer/ managers explain the safety mission clearly</p> <p>Majikan/ pengurus saya menerangkan tentang misi keselamatan dengan jelas</p> <p>আমার নিয়োগকর্তা / পরিচালকরা পরিষ্কারভাবে নিরাপত্তা মিশন ব্যাখ্যা করে</p> | 1 | 2 | 3 | 4 | 5 |
| 7. | <p>My employer/ managers emphasize worksite safety</p> <p>Majikan/ pengurus saya menekankan keselamatan tempat kerja</p> <p>আমার নিয়োগকর্তা / ম্যানেজার কর্মস্থলের নিরাপত্তা সম্পর্কে জোর দেয়</p> | 1 | 2 | 3 | 4 | 5 |
| 8. | <p>My employer/ managers have established a safety responsibility system</p> <p>Majikan/ pengurus saya telah menubuhkan system tanggungjawab keselamatan</p> <p>আমার নিয়োগকর্তা / পরিচালকদের একটি নিরাপত্তা দায়িত্ব সিস্টেম প্রতিষ্ঠিত হয়েছে</p> | 1 | 2 | 3 | 4 | 5 |

- | | | | | | | |
|-----|--|---|---|---|---|---|
| 9. | My employer/ managers establish clear safety goals
Majikan/ pengurus saya menubuhkan matlamat keselamatan yang jelas
আমার নিয়োগকর্তা / ম্যানেজার পরিষ্কার নিরাপত্তা লক্ষ্য স্থাপন করে | 1 | 2 | 3 | 4 | 5 |
| 10. | My supervisor discusses safety issues with others
Penyelia saya membincangkan isu keselamatan dengan orang lain
আমার সুপারভাইজার অন্যদের সাথে নিরাপত্তা সমস্যা নিয়ে আলোচনা করে | 1 | 2 | 3 | 4 | 5 |
| 11. | My supervisor conducts safety procedures
Penyelia saya menjalankan prosedur keselamatan
আমার সুপারভাইজার নিরাপত্তা পদ্ধতি পরিচালনা করে | 1 | 2 | 3 | 4 | 5 |

12. My supervisor provides safety information
 Penyelia saya menyediakan informasi tentang keselamatan
 আমার সুপারভাইজার নিরাপত্তা তথ্য প্রদান করে

1

2

3

4

5

13. My employer/ managers reward those who set an example in safety behavior
 Majikan/ pengurus saya memberi ganjaran kepada mereka yang memberikan contoh baik dalam tingkah laku keselamatan
 আমার নিয়োগকর্তা / ম্যানেজাররা যারা সুরক্ষা আচরণে একটি উদাহরণ স্থাপন করে তাদের পুরস্কৃত করে

1

2

3

4

5

14. My employer/ managers praise workers' safety behaviours
Majikan/ pengurus saya memuji tingkah laku keselamatan pekerja
আমার নিয়োগকর্তা / পরিচালক শ্রমিকদের নিরাপত্তা আচরণের প্রশংসা করেন

1

2

3

4

5

15. My employer/ managers have set up a safety incentive system
Majikan/ pengurus saya menubuhkan sistem insentif keselamatan
আমার নিয়োগকর্তা / পরিচালকরা একটি সুরক্ষা উদ্দীপক সিস্টেম সেট আপ করেছেন

1

2

3

4

5

Section C

Bahagian C

বিভাগ সি

To what extent do you agree or disagree with each statement below describing your current company? Please select the most accurate based on the scale above and **circle** your answer.

Sejauh mana anda bersetuju atau tidak bersetuju dengan setiap kenyataan di bawah yang menggambarkan syarikat anda sekarang? Sila pilih yang paling tepat dan **bulatkan** jawapan anda berpandukan skala di atas.

নিচের প্রতিটি বিবৃতির সাথে আপনি কতটা একমত বা অসম্মতি জানান যা আপনার কোম্পানিকে এখন বর্ণনা করে? উপরে স্কেল উপর ভিত্তি করে সবচেয়ে সঠিক নির্বাচন এবং আপনার উত্তর বৃত্ত করুন।

Strongly Disagree/ Sangat Tidak Setuju/ দৃঢ়ভাবে অসম্মতি	Disagree/ Tidak Setuju/ অসম্মতি	Neither Agree nor Disagree/ Berkecuali/ নিরপেক্ষতা	Agree/ Setuju/ একমত	Strongly Agree/ Sangat Setuju/ দৃঢ়ভাবে একমত
1	2	3	4	5

No	Question	Strongly Disagree/ Sangat Tidak Setuju/ দৃঢ়ভাবে অসম্মতি	Disagree/ Tidak Setuju/ অসম্মতি	Neither Agree nor Disagree/ Berkecuali/ নিরপেক্ষতা	Agree/ Setuju/ একমত	Strongly Agree/ Sangat Setuju/ দৃঢ়ভাবে একমত
1.	The frequency of accidents is reducing Kekerapan kemalangan semakin berkurangan দুর্ঘটনার ফ্রিকোয়েন্সি হ্রাস করা হয়	1	2	3	4	5
2.	The frequency of equipment failure is reducing Kekerapan kegagalan peralatan semakin berkurangan সরঞ্জাম ব্যর্থতার ফ্রিকোয়েন্সি হ্রাস করা হয়	1	2	3	4	5

3. The value of product defect and damage is reducing
Jumlah nilai kerosakan dan kecacatan produk semakin
berkurangan
পণ্য ত্রুটি এবং ক্ষতি মান হ্রাস করা হয়

1

2

3

4

5

4. The number of personal injuries is reducing
Bilangan kecederaan pekerja semakin berkurangan
ব্যক্তিগত আঘাতের সংখ্যা হ্রাস করা হয়

1

2

3

4

5